Supreme Court, U.S.
FILED
JUL - 9 2015
OFFICE OF THE CLERK

Nos. 14-840, 14-841

IN THE

Supreme Court of the United States

FEDERAL ENERGY REGULATORY COMMISSION,

Petitioner,

v.

ELECTRIC POWER SUPPLY ASSOCIATION, *et al.*,

Respondents.

ENERNOC, INC. *et al.*,

Petitioners,

v.

ELECTRIC POWER SUPPLY ASSOCIATION, *et al.*,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

BRIEF OF PRIVATE PETITIONERS

CARTER G. PHILLIPS *
C. FREDERICK BECKNER III
SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, D.C. 20005
(202) 736-8000
cphillips@sidley.com

Counsel for EnerNOC, Inc.

* Counsel of Record

[Additional Counsel on Inside Cover]

July 9, 2015

MARVIN T. GRIFF
HUSCH BLACKWELL LLP
750 17th Street, NW
Suite 900
Washington, DC 20006
(202) 378-2300
marvin.griff@huschblackwell.com

Counsel for
EnergyConnect, Inc.

MATTHEW J. CUSHING
ENERNOC, INC.
One Marina Park Drive
Suite 400
Boston, MA 02210
(617) 692-2690
mcushing@enernoc.com

Counsel for
EnerNOC, Inc.

ROBERT A. WEISHAAR, JR.
MCNEES WALLACE &
NURICK LLC
777 N. Capitol Street, NE
Suite 401
Washington, DC 20002
(202) 898-5700
rweishaa@mwn.com

Counsel for
the Coalition of MISO
Transmission Customers
and PJM Industrial
Customer Coalition

ALLEN M. FREIFELD
1801 Market Street
Philadelphia, PA 19103
(484) 534-2191
afreifeld@viridityenergy.com

Counsel for
Viridity Energy, Inc.

QUESTIONS PRESENTED

1. Whether the Federal Energy Regulatory Commission reasonably concluded that it has authority under the Federal Power Act, 16 U.S.C. 791a *et seq.*, to regulate the rules used by operators of wholesale electricity markets to pay for reductions in electricity consumption and to recoup those payments through adjustments to wholesale rates.

2. Whether the Court of Appeals erred in holding that the rule issued by the Federal Energy Regulatory Commission is arbitrary and capricious.

PARTIES TO THE PROCEEDING

Parties to the proceeding below:

American Forest & Paper Association
American Municipal Power, Inc.
American Public Power Association
California Public Utilities Commission
California Independent System Operator Corporation
Coalition of MISO Transmission Customers
Edison Electric Institute
Electric Power Supply Association
EnergyConnect, Inc.
EnerNOC, Inc.
Federal Energy Regulatory Commission
Lower Mount Bethel Energy, LLC
Madison Gas and Electric Company
Maryland Public Service Commission
Missouri Joint Municipal Electric Utility Commission
Missouri River Energy Services
National Rural Electric Cooperative Association
Old Dominion Electric Cooperative
Pennsylvania Public Utility Commission
PJM Industrial Customer Coalition
PJM Interconnection, LLC
PJM Power Providers Group
PPL Brunner Island, LLC
PPL Electric Utilities Corporation
PPL EnergyPlus, LLC
PPL Holtwood, LLC
PPL Maine, LLC
PPL Martins Creek, LLC
PPL Montour, LLC
PPL Susquehanna, LLC
PSEG Energy Resources & Trade LLC

PSEG Power LLC
Public Service Electric and Gas Company
Southern Minnesota Municipal Power Agency
Steel Producers
Viridity Energy, Inc.
Wal-Mart Stores, Inc.
WPPI Energy

TABLE OF CONTENTS

	Page
QUESTIONS PRESENTED	i
PARTIES TO THE PROCEEDING	ii
TABLE OF AUTHORITIES	vii
OPINIONS BELOW	1
JURISDICTION	1
STATUTORY PROVISIONS INVOLVED	1
INTRODUCTION	1
STATEMENT OF THE CASE	4
SUMMARY OF ARGUMENT	24
ARGUMENT	28
I. FERC REASONABLY CONCLUDED THAT IT HAS JURISDICTION TO REGULATE THE RULES GOVERNING DEMAND RESPONSE PARTICIPATION IN ORGANIZED WHOLESALE ENERGY MARKETS	29
A. The FPA's Text Plainly Provides FERC With Jurisdiction	29
B. This Court's Cases Make Clear That FERC Has Jurisdiction To Regulate Demand Response Participation In Organized Wholesale Energy Markets	35
C. FERC Has Reasonably Determined That Regulating Demand Response Participation In Wholesale Markets Is Necessary To Ensure Just And Reasonable Wholesale Rates	38

TABLE OF CONTENTS—continued

Page

II. FERC'S REASONABLE JUDGMENT ABOUT THE APPROPRIATE COMPENSATION FOR DEMAND RESPONSE PARTICIPATION IN WHOLESALE MARKETS IS ENTITLED TO DEFERENCE AND SHOULD BE UPHELD 41

A. FERC's Judgment Is Reasonable And Fully Supported By The Record 41

B. FERC Reasonably Explained Its Decision And Addressed Contrary Contentions 50

CONCLUSION 56

TABLE OF AUTHORITIES

CASES Page

Ark. La. Gas Co. v. Hall, 453 U.S. 571 (1981) 30
Barnhart v. Walton, 535 U.S. 212 (2002) 33
City of Arlington v. FCC, 133 S. Ct. 1863 (2013) 29
Conn. Dep't of Pub. Util. Control v. FERC, 569 F.3d 477 (D.C. Cir. 2009) 7
Fed. Power Comm'n v. Conway Corp., 426 U.S. 271 (1976) 30
Fed. Power Comm'n v. La. Power & Light Co., 406 U.S. 621 (1972) 31, 34, 37
Miss. Power & Light Co. v. Miss. ex rel. Moore, 487 U.S. 354 (1988) 30, 35
Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1, 554 U.S. 527 (2008) 5, 6, 41, 55
Nantahala Power & Light Co. v. Thornburg, 476 U.S. 953 (1986) 37
Nat'l Rural Telecom Ass'n v. FCC, 988 F.2d 174 (D.C. Cir. 1993) 52
New York v. FERC, 535 U.S. 1 (2002) 4, 5, 6
N. Natural Gas Co. v. State Corp. Comm'n, 372 U.S. 84 (1983) 36
NRG Power Mktg. LLC v. Me. Pub. Util. Comm'n, 558 U.S. 165 (2010) 6
Nw. Cent. Pipeline Corp. v. State Corp. Comm'n, 489 U.S. 493 (1989) 29, 30
ONEOK, Inc. v. Learjet, Inc., 135 S. Ct. 1591 (2015) 31, 37, 38
Permian Basin Area Rate Cases, 390 U.S. 747 (1968) 30

TABLE OF AUTHORITIES—continued

Page

Pub. Utils. Comm'n v. Attleboro Steam & Elec. Co., 273 U.S. 83 (1927), *abrogated on other grounds by Ark. Elec. Coop. Corp. v. Ark. Pub. Serv. Comm'n*, 461 U.S. 375 (1983) 4

Sacramento Mun. Util. Dist. v. FERC, 616 F.3d 520 (D.C. Cir. 2010) 8

Schneidewind v. ANR Pipeline Co., 485 U.S. 293 (1988) 30

Wis. Pub. Power Inc. v. FERC, 493 F.3d 239 (D.C. Cir. 2007) 8

STATUTES AND REGULATIONS

Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 ..... 1, 3

16 U.S.C. § 824 ..... *passim*

§ 824d 1, 5, 47

§ 824e ..... *passim*

§ 2642 note 27, 49

18 C.F.R. § 35.2(a) 7

§ 35.28 ..... 1, 7, 10, 16

§ 35.34 ..... 7, 49

§ 35.36 *et seq* 7

TABLE OF AUTHORITIES—continued

Page

Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 Fed. Reg. 21,540 (May 10, 1996), *order on reh'g*, Order No. 888-A, 62 Fed. Reg. 12,274 (Mar. 14, 1997), *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Grp. v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002) 49

Demand Response Compensation in Organized Wholesale Energy Markets, 75 Fed. Reg. 15,362 (Mar. 29, 2010) ..... *passim*

ADMINISTRATIVE DECISIONS

Demand Response Compensation in Organized Wholesale Energy Markets, Order 745, 134 FERC ¶ 61,187 (2011), *aff'd*, Order 745-A, 137 FERC ¶ 61,215 (2011) ..... *passim*

Demand Response Compensation in Organized Wholesale Energy Markets, Order 745-A, 137 FERC ¶ 61,215 (2011) ..... *passim*

New England Power Pool ISO New England, Inc., 101 FERC ¶ 61,344 (2002) 12

PJM Interconnection, LLC, 95 FERC ¶ 61,306 (2001) 12

TABLE OF AUTHORITIES—continued

Page

Preventing Undue Discrimination & Preference in Transmission Serv., Order 890, 118 FERC ¶ 61,119 (2007), *order on reh'g*, Order 890-A, 121 FERC ¶ 61,297 (2007), *order on reh'g and clarification*, Order 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order 890-C, 126 FERC ¶ 61,228 (2009), *order on clarification*, Order 890-D, 129 FERC ¶ 61,126 (2009) .. 12

Wholesale Competition in Regions with Organized Elec. Mkts., Order 719, 125 FERC ¶ 61,071, ¶ 10 (2008), *aff'd*, Order 719-A, 128 FERC ¶ 61,059 (2009) 6, 9, 12, 13

Wholesale Competition in Regions with Organized Elec. Mkts., Order 719-A, 128 FERC ¶ 61,059 (2009) 13

SCHOLARLY AUTHORITIES

Stephen Breyer, *Regulation and its Reform* (1982) 52

Joel Eisen, *Who Regulates the Smart Grid?*, 4 San Diego J. of Climate & Energy L. 69 (2012–13) 9, 10

Herbert Hovenkamp, *Federal Antitrust Policy* (1994) 52

William Massey, Robert Fleishman & Mary Doyle, *Reliability-Based Competition in Wholesale Electricity: Legal and Policy Perspectives*, 25 Energy L.J. 319 (2004) 39

Hal Varian, *Intermediate Microeconomics* (2d ed. 1990) 52

TABLE OF AUTHORITIES—continued

OTHER AUTHORITIES — Page

EnerNOC, *What is an Ancillary Services Market*, http://www.enernoc.com/our-resources/term-pages/what-is-an-ancillary-services-market (last visited July 6, 2015) 7

FERC, *Assessment of Demand Response and Advanced Metering* (2008), *available at* http://www.ferc.gov/legal/staff-reports/12-08-demand-response.pdf 44

FERC, *Assessment of Demand Response and Advanced Metering* (2013), *available at* http://www.ferc.gov/legal/staff-reports/2013/oct-demand-response.pdf 44

FERC, *Energy Primer: A Handbook of Energy Market Basics* (July 2012), http://www.ferc.gov/market-oversight/guide/energy-primer.pdf 6, 7, 54

FERC, *A National Assessment of Demand Response Potential* (June 2009), *available at* http://www.ferc.gov/legal/staff-reports/06-09-demand-response.pdf 8, 46

U.S. Dep't of Energy, *Benefits of Demand Response in Electricity Markets and Recommendations for Achieving Them* (2006), *available at* http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/DOE_Benefits_of_Demand_Response_in_Electricity_Markets_and_Recommendations_for_Achieving_Them_Report_to_Congress.pdf 39

TABLE OF AUTHORITIES—continued

Page

U.S. Dep't of Energy, *Smart Grid Investment Grant Program: Progress Report II* (2013), *available at* http://energy.gov/sites/prod/files/2013/10/f3/SGIG_progress_report_2013.pdf 11

OPINIONS BELOW

The court of appeals' opinion is reported at 753 F.3d 216, and reproduced in the Appendix to the Petition ("App.") at 1a–45a. The Federal Energy Regulatory Commission orders under review are Order 745, Final Rule, reported at 134 FERC ¶ 61,187 (2011), and Order 745-A, Order on Rehearing and Clarification, reported at 137 FERC ¶ 61,215 (2011). They are reproduced at App. 140a–253a and App. 46a–139a, respectively.

JURISDICTION

The court of appeals entered judgment on May 23, 2014. Petitioners timely filed a petition for certiorari on January 15, 2015. This Court granted the petition on May 4, 2015. This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

The statutes involved are the Federal Power Act sections 201, 205 and 206, 16 U.S.C. §§ 824, 824d and 824e, and section 2642 of the Energy Policy Act of 2005. The regulation involved is 18 C.F.R. § 35.28. All are set forth in the Appendix to the Petition. App. 260a–298a.

INTRODUCTION

This case concerns the authority of the Federal Energy Regulatory Commission ("FERC" or "the Commission") to adopt regulations that are essential to ensure just and reasonable rates for wholesale energy and that enhance the reliability of the nation's electric power grid.

The Federal Power Act ("FPA") provides FERC with authority to regulate both "the sale of electric energy at wholesale in interstate commerce," and "any ... practice ... affecting" wholesale rates. 16 U.S.C. §§ 824(b)(1), 824e(a). FERC actively regulates the organized wholesale electricity markets operated by a small number of regional transmission systems operators.

Over the past decade, FERC has acted to eliminate barriers that might preclude "demand response resources" from entering organized wholesale electricity markets and competing with electric power generators. In Orders 745 and 745-A, FERC found that demand response participation directly affects (lowers) wholesale energy prices, improves system reliability, and encourages technological innovation. And, FERC concluded that despite its efforts, there has been insufficient demand response participation in the wholesale energy markets it regulates to ensure just, reasonable and non-discriminatory rates in those markets. Accordingly, FERC determined that the system operators that administer wholesale energy markets must pay all market participants—generators and demand response resources alike—the same amount when demand response is providing a benefit equivalent to that provided by generation, *i.e.*, where demand response assists in balancing the load on a system and provides a net benefit to electricity consumers.

In the decision under review, however, the D.C. Circuit held: (i) FERC lacks jurisdiction to regulate the purchase of demand response in organized wholesale energy markets, and (ii) FERC's decision concerning the appropriate compensation to be paid to those resources was not adequately explained

under the Administrative Procedure Act. Both aspects of the decision are wrong.

FERC's longstanding view that it has jurisdiction to regulate demand response participation in wholesale markets is correct and entitled to deference. It is undisputed that demand response has a significant impact in the wholesale energy market by "lower[ing] the wholesale price" and "increas[ing] system reliability." App. 7a. Thus, regulation of demand-side participation in wholesale energy markets is plainly regulation of a practice "affecting" wholesale rates within FERC's jurisdiction. The FPA's text makes this clear, and this Court's cases confirm it. Indeed, FERC jurisdiction to regulate demand response participation in organized wholesale markets is critical to its compliance with Congress's instruction in the Energy Policy Act of 2005 ("EPAct"), Pub. L. No. 109-58, § 1215(f), 119 Stat. 594, 966, that FERC encourage demand response participation in these markets.

FERC's authority to issue the Orders under review is not altered by the states' exclusive jurisdiction over retail sales of electricity. The sale of demand response is not a "sale of electric energy" at all. Rather, it is a sale of a service to the wholesale market. And, FERC's regulation of demand response participation in *wholesale* energy markets does not set or modify retail rates. This Court has repeatedly held that FERC is not divested of authority to regulate wholesale markets simply because that regulation somehow indirectly affects retail sales.

FERC also reasonably determined that demand response resources should be paid the same compensation as generators when those resources assist in balancing supply and demand on the system and provides a net benefit to purchasers. In those

circumstances, demand response is economically and functionally equivalent to generation. Moreover, the Commission found that the substantial barriers to full participation of demand response resources in wholesale energy markets coupled with the failure of many system operators to pay sufficient compensation had resulted in inadequate levels of demand response in those markets. Thus, consistent with Congress's direction, FERC chose a compensation standard that would address the economic barriers to adequate demand response participation in wholesale energy markets and ensure just, reasonable, and nondiscriminatory rates. FERC's detailed findings and analysis provide a reasoned basis for the compensation standard in Order 745, and the court of appeals should have deferred to the Commission's expert ratemaking judgment.

STATEMENT OF THE CASE

1. *Background.* During the 20th century, "most electricity was sold by vertically integrated utilities that had constructed their own power plants, transmission lines, and local delivery systems" to generate, transmit and sell electricity to end users. *New York v. FERC*, 535 U.S. 1, 5 (2002). These utilities "operated as separate, local monopolies subject to state or local regulation." *Id.* In 1927, this Court held that the dormant Commerce Clause barred *states* from regulating *interstate* electricity transactions, such as wholesale interstate sales of power. *See Pub. Utils. Comm'n v. Attleboro Steam & Elec. Co.*, 273 U.S. 83, 89 (1927), *abrogated on other grounds by Ark. Elec. Coop. Corp. v. Ark. Pub. Serv. Comm'n*, 461 U.S. 375 (1983).

In 1935, Congress enacted the FPA, to fill the regulatory gap created by the dormant Commerce Clause and regulate interstate electricity transmission and sales. The FPA gave the Federal Power Commission (and subsequently FERC) authority over the "transmission" and "sale of electric energy at wholesale" in interstate commerce. 16 U.S.C. § 824(b)(1). Under the FPA, FERC's central regulatory duties are (i) to ensure that "any rate, charge, or classification" by a public utility "for or in connection with" interstate transmission or wholesale sales is "just and reasonable," and not "unduly discriminatory or preferential," *id.* §§ 824d(a), (b), 824e(a); and (ii) to change "any rule, regulation, practice, or contract affecting such rate, charge, or classification" that is "unjust, unreasonable, unduly discriminatory, or preferential." *Id.* § 824e(a).

As technological advances have made it possible to generate and transmit electricity efficiently, the energy market has transformed from a collection of local monopolies to an interconnected system of resources that engage in interstate competition. *See New York*, 535 U.S. at 7 ("electricity that enters the grid immediately becomes a part of a vast pool of energy that is constantly moving in interstate commerce"). As a result, FERC has changed how it ensures the reasonableness and fairness of interstate energy transactions. Instead of doing so exclusively by setting cost-based rates, FERC now generally regulates interstate energy markets to promote competition. *See Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cnty.*, 554 U.S. 527, 536 (2008). FERC has explained that "[i]mproving the competitiveness of organized wholesale energy markets is ... integral to the Commission fulfilling its statutory mandate under

the FPA to ensure supplies of electric energy at just, reasonable, and not unduly discriminatory or preferential rates." *Demand Response Compensation in Organized Wholesale Energy Mkts.*, Order 745, 134 FERC ¶ 61,187, ¶ 8 (2011) (App. 145a), *aff'd*, Order 745-A, 137 FERC ¶ 61,215 (2011).

Over the years, FERC has acted to strengthen competition in wholesale markets. *See New York*, 535 U.S. at 11-13. Relevant here, FERC concluded that "the development of regional markets is the best method of facilitating competition within the power industry." *Wholesale Competition in Regions with Organized Elec. Mkts.*, Order 719, 125 FERC ¶ 61,071, ¶ 10 (2008), *aff'd*, Order 719-A, 128 FERC ¶ 61,059 (2009). Thus, FERC authorized the creation of "'Regional Transmission Organizations [RTOs]'" and "'Independent System Operators [ISOs]'" to operate and oversee certain multistate systems and markets. *See Morgan Stanley*, 554 U.S. at 536. Generally speaking, RTOs and ISOs operate "the transmission facilities owned by member utilities. [They] provide open access to the regional transmission systems to all electricity generators at rates established in a single, unbundled, grid-wide tariff ...." *NRG Power Mktg. LLC v. Me. Pub. Util. Comm'n*, 558 U.S. 165, 169 n.1 (2010).

These transmission system operators, however, do "more than operate the transmission system and dispatch generation." FERC, *Energy Primer: A Handbook of Energy Market Basics* 42 (July 2012) ("*Energy Primer*"), *available at* http://www.ferc.gov/market-oversight/guide/energy-primer.pdf. They have "develop[ed] markets in which buyers and sellers could bid for or offer generation." *Id.* These electricity markets administered by transmission system operators are known as "organized markets."

RTOs and ISOs operate one or more distinct competitive bidding markets comprising various elements of FERC jurisdictional electric service, including what are referred to as markets for "energy," "capacity," and certain transmission services (known as "ancillary services").[1] 18 C.F.R. §§ 35.2(a), 35.28(g)(1), 35.34(j)(2), 35.36 *et seq.* (Subpart H). This case involves organized wholesale energy markets. Energy markets involve the sale and purchase of electricity for delivery within the next hour or the next 24 hours, also known as real-time and day-ahead markets. *Energy Primer*, *supra* at 64.

2. *Wholesale Energy Markets and Demand Response.* Electricity cannot currently be cost-effectively stored for later use in significant quantities. As a result, to maintain reliable service, system operators must ensure that the supply (sales) of electricity is continuously and instantaneously balanced with demand from the entities that buy wholesale electricity. They do so by, among other things, operating bidding markets that match buyers and sellers each hour of the day and deliver the power to state-regulated retail markets. *See id.* The real-time and next-day bidding markets operated by

---

[1] "'Capacity' is not electricity itself but the ability to produce it when necessary. It amounts to a kind of call option that electricity transmitters purchase" from suppliers, who can be either generators or demand response providers and "who can either produce more or consume less when required." *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477, 479 (D.C. Cir. 2009). The ancillary services market, generally speaking, involves services that allow a grid operator to account for short-term increases or decreases in electric demand and to maintain system reliability. *See* EnerNOC, *What is an Ancillary Services Market*, http://www.enernoc.com/our-resources/term-pages/what-is-an-ancillary-services-market (last visited July 6, 2015).

RTOs and ISOs accomplish this by allowing wholesale prices to change rapidly in response to changes in demand. *See Wis. Pub. Power Inc. v. FERC*, 493 F.3d 239, 250 (D.C. Cir. 2007).

Some suppliers can offer electricity inexpensively, while others are more costly to operate. As the demand for electricity peaks (*e.g.*, during a heat wave), the system operator may be required to dispatch electricity from more costly suppliers to meet demand. At any given moment, the wholesale market price used to compensate *all* suppliers at a specific location is the marginal cost of electricity, known as the locational marginal price ("LMP"). The LMP is "designed to reflect the least-cost of meeting an incremental megawatt-hour of demand at each location on the grid, and thus prices vary based on location and time." *Sacramento Mun. Util. Dist. v. FERC*, 616 F.3d 520, 524 (D.C. Cir. 2010); *see also* Order 745 ¶ 53 (App. 179a–180a). System operators may calculate LMP differently, but "each method establishes the marginal value of resources in that market" at a particular place and time. Order 745 ¶ 2 n.5 (App. 142a).

Unlike wholesale prices, retail prices, *i.e.*, electricity prices charged to consumers, are not generally permitted to fluctuate hour-by-hour or even day-by-day. Accordingly, retail demand typically does not respond to changes in the underlying price of electricity in the wholesale market. Order 745-A ¶¶ 59, 61 (App. 82a–84a); Order 745 ¶ 57 (App. 181a–182a); FERC, *A National Assessment of Demand Response Potential* 65–66, 189–90 (June 2009) ("*National Assessment*"), *available at* http://www.ferc.gov/legal/staff-reports/06-09-demand-response.pdf. As demand for energy peaks, incremental increases in the cost of electricity on the wholesale market can

be substantial because the system must use power produced by its most inefficient plants. *See* App. 21a–22a (Edwards, J., dissenting). Yet consumers do not *directly experience* increases in the price of the electricity they consume as demand peaks, and thus do not respond to increasing wholesale prices by reducing demand. *Id.* at 22a. And because retail demand is not moderated by increasing prices, there has historically "been overbuilding of plants that only run at peak hours." Joel Eisen, *Who Regulates the Smart Grid?*, 4 San Diego J. of Climate & Energy L. 69, 78 (2012–13). This is because a "strictly supply-side management strategy requires sufficient peaking capacity and reserve margins to reliably meet the highest load on hot summer days ... plus a contingency for outages and other disruptive events." *Id.*

The Commission long ago identified this problem, *see* Order 719 ¶ 18 & nn.17–18 (citing orders expressing this concern), and a partial solution. In Order 745-A, FERC reaffirmed that:

> [a] properly functioning market should reflect both the willingness of sellers to sell at a price and the willingness of buyers to purchase at a price. In an RTO- or ISO-run market, however, buyers are generally unable to directly express their willingness to pay for a product at the price offered.

Order 745-A ¶ 30 (App. 66a).

Demand can be reduced, however, if electricity consumers are paid for commitments to reduce their consumption during peak periods. And when it costs less to pay to reduce demand than it does to generate power, a system operator can balance supply and

demand and maintain system reliability at a lower wholesale price.

Demand response is not "energy." Instead, it is an immediately dispatchable service designed to result in a reduction in electricity consumption. *See* 18 C.F.R. § 35.28(b)(4) (defining demand response as "a reduction in the consumption of electric energy by customers from their expected consumption in response to an increase in the price of electric energy or to incentive payments designed to induce lower consumption of electric energy"). Individually or in aggregate (by combining small commercial or industrial customers, or residential customers), electricity consumers can provide a substantial amount of demand response (*e.g.*, if a large industrial customer shifts the time of day of production or if a service provider deploys software to enable real-time control of thermostats for air conditioners or hot water heaters).

Demand response in wholesale markets, accordingly, does not involve individual customers flipping off a light switch or turning down a thermostat. It generally involves a new business service, *viz.*, a demand response provider that aggregates demand-side flexibility for businesses and consumers to ensure its reliability and then bids aggregated reductions as a block into wholesale markets. *See* Eisen, *supra*, at 81. Demand response participation in electricity markets requires substantial investment "in demand response-enabling technology (such as metering equipment, energy usage monitors and process controls)." Demand Response Compensation in Organized Wholesale Energy Markets, 75 Fed. Reg. 15,362, 15,366, ¶ 16 (Mar. 29, 2010) ("NOPR") (JA38). For example, in reliance on FERC's actions over the past decade,

private companies and the federal government have invested billions of dollars to develop and deploy technologies necessary to enable a smart electric power grid. *See, e.g.*, U.S. Dep't of Energy, *Smart Grid Investment Grant Program: Progress Report II* (2013), *available at* http://energy.gov/sites/prod/files/2013/10/f3/SGIG_progress_report_2013.pdf.

When reductions in demand are large enough or aggregated over a sufficient number of customers and can be deployed quickly and reliably, the total reduction becomes a significant resource for system operators to use instead of more expensive generation to ensure just and reasonable rates. As economist Dr. Alfred Kahn explained, in these circumstances, "'[demand response] is in all essential respects economically equivalent to supply response'" and should "'be treated equivalently to generation in competitive power markets.'" Order 745 ¶ 20 (App. 155a–156a) (alteration in original) (quoting 2010 Affidavit of Dr. Alfred Kahn).

Regional system operators began using, and FERC began regulating, demand response participation in organized wholesale electricity markets more than a decade ago. Demand response resources initially participated in organized wholesale markets when several regional system operators sought FERC approval of tariffs that incorporated demand response to address supply shortfalls and emergencies.[2] Subsequently, these system operators filed tariffs that authorized demand response participation in real-time and day-ahead wholesale energy markets. *See, e.g.*, NOPR ¶ 8 & nn.25–28 (JA30–31).

---

[2] *See also* NOPR ¶ 7 & n.23 (JA29–30); Order 745 ¶ 13 n.27 (listing a number of tariffs from 2001 through 2010) (App. 149a–150a).

As early as May 2001, however, FERC found that "the current lack of meaningful demand side response is a flaw in the markets operated by PJM [the nation's largest RTO] which, if not corrected, could lead to dysfunction in those markets." *PJM Interconnection, LLC*, 95 FERC ¶ 61,306, at 62,043 (2001). *See also New England Power Pool ISO New England, Inc.*, 101 FERC ¶ 61,344, ¶ 46 (2002) ("measures that facilitate a robust demand response are essential to the success of competitive wholesale markets").

In 2005, Congress enacted the EPAct, which declared as "the policy of the United States that ... unnecessary barriers to demand response participation in energy, capacity and ancillary service markets shall be eliminated." 16 U.S.C. § 2642 note. Thereafter, FERC accelerated its efforts to eliminate obstacles to such participation in wholesale markets. *See* Order 745 ¶ 11 (App. 148a). In 2007, in Order 890, FERC authorized non-generation resources, including demand response resources, to provide specified ancillary services related to transmission (*e.g.*, to address an unexpected, short-term increase in demand) on comparable terms to those available to generation resources. *Preventing Undue Discrimination & Preference in Transmission Serv.*, Order 890, 118 FERC ¶ 61,119 (2007).

In 2008, FERC reaffirmed its policy "to identify and eliminate barriers to participation of demand response resources in organized power markets." *See* Order 719 ¶ 48. In Order 719, FERC implemented reforms to "remov[e] several barriers to the development and use of demand response resources in organized wholesale electric power markets." *Id.*

Specifically, FERC required system operators to "permit an aggregator of retail customers (ARC) to

bid demand response on behalf of retail customers directly into the organized energy market," and to "accept bids from demand response resources in RTOs' and ISOs' markets for certain ancillary service on a basis comparable to other resources." *Id.* ¶¶ 3, 47, 154 (footnote omitted). These requirements would apply "unless the laws or regulations of the relevant electric retail regulatory authority do not permit a retail customer to participate." *Id.* ¶¶ 47, 154. FERC concluded that its order "properly balance[d] the Commission's goal of removing barriers to development of demand response resources in the organized markets that we regulate with the interests and concerns of state and local regulatory authorities." *Id.* ¶ 156.

In its rehearing order, Order 719-A, FERC responded to comments asserting that the Commission lacked jurisdiction. It first noted the narrow focus of its rule: "It directs an RTO or ISO that operates an organized wholesale electric market—a market subject to the Commission's exclusive jurisdiction—to reduce certain barriers to demand response participation in that market." Order 719-A ¶ 48. FERC also explained that demand response has a direct effect on wholesale prices:

> The direct effect occurs when demand response is bid directly into the wholesale market: lower demand means a lower wholesale price.... Demand response tends to flatten an area's load profile, which in turn may reduce the need to construct and use more costly resources during periods of high demand; the overall effect is to lower the average cost of producing energy.

Id. ¶ 47 (footnote omitted).

As the preceding history shows, the orders under review—Orders 745 and 745-A—are part of a lengthy process in which system operators have expanded the range of demand response participation in wholesale electricity markets.

3. *Orders 745 and 745-A.*

a. Notice of Proposed Rulemaking. For years, FERC allowed each system operator to develop its own methods to determine compensation for demand response resources participating in wholesale markets. Demand response participation varied substantially from system to system and was generally inadequate. NOPR ¶ 8 (JA30–32); *see also* Order 745 ¶ 14 (App. 150a–152a).

In 2010, FERC issued a Notice of Proposed Rulemaking. First, it expressed a concern that:

> [d]espite the benefits of demand response and various efforts by the Commission, ISOs and RTOs to address barriers to and compensation for demand response participation, demand response providers collectively play a small role in wholesale markets. After several years of observing demand response participation in ISO and RTO markets with different, and often evolving, demand response compensation structures, the Commission is concerned that some existing, inadequate compensation structures have hindered the development and use of demand response.

NOPR ¶ 9 (JA32); *see also id.* ¶ 13 ("current wholesale compensation levels may therefore be leading to under-investment in demand response resources") (JA35–36); *id.* ¶ 16 (similar) (JA37–38).

Further, FERC observed: "there are indications that demand response resources react correspondingly to increases or decreases in payment." *Id.* ¶ 10 (JA33).

> PJM provides a case study on this point. It first implemented its Economic Load Response Program (Economic Program) providing for demand response compensation in June 2002. Several years later, starting in January 2008, when PJM reduced its compensation for demand response, settled demand reductions began decreasing from previous years.

Id. (JA33) (footnote omitted) (citing *PJM Interconnection, L.L.C.*, 99 FERC ¶ 61,227 (2002)).

Thus, "the Commission is now concerned that evidence of demand reductions in PJM, and inadequate demand response participation, now and in the future, may be the result of compensation that is no longer just and reasonable." *Id.* (JA34). FERC then explained, "[g]iven that LMP represents the marginal value of the resource being used by the RTO or ISO to balance supply and demand, it follows that the LMP should be paid to any resource clearing in the RTO's or ISO's energy market." *Id.* ¶ 15 (JA36–37).

b. Orders 745 & 745-A. After considering approximately 3,800 pages of comments and holding a technical conference, FERC issued Order 745. FERC did *not* require "compensation at LMP in all hours" for demand response resources. Order 745 ¶ 53 (App. 179a). Instead, FERC concluded that system operators should compensate demand response resources "at the market price for energy, referred to as the locational marginal price" when, and only when, demand response resources assist in

(i) "balanc[ing] supply and demand as an alternative to a generation resource" and (ii) when "dispatch of that demand response resource is cost-effective as determined by the net benefits test." *Id.* ¶ 2 (App. 141a–142a). These two criteria require "compensation of demand response resources *only when* their participation in the wholesale electricity market actually lowers the market-clearing price for wholesale electricity." App. 17a. Significantly here, FERC required system operators to bar demand response participation from customers subject to the retail electric rate authority of a state or local government that prohibits such participation in their wholesale markets. *See* 18 C.F.R. § 35.28(g)(1)(i)(A).

In responding to comments asserting that it lacked jurisdiction, FERC explained that FPA section 205 requires it to ensure that rates and charges for or "'in connection with'" the "sale for resale of electric energy in interstate commerce, and all rules and regulations 'affecting or pertaining to' such rates or charges are just and reasonable." Order 745 ¶ 112 (App. 219a). Citing its prior rulemakings, FERC observed that demand response that is directly bid and clears in the wholesale energy markets "directly affects" wholesale rates in wholesale electricity markets, giving it jurisdiction "to regulate the market rules under which an ISO or RTO accepts a demand response bid into a wholesale market." *Id.* ¶¶ 112–113 (citing Order 719-A ¶ 52) (App. 219a–220a).

FERC also explained that "[i]mproving the competitiveness of organized wholesale energy markets is ... integral to the Commission fulfilling its statutory mandate under the FPA to ensure supplies of electric energy at just, reasonable, and not unduly discriminatory or preferential rates." *Id.* ¶ 8 (App. 145a). Further, FERC stated that "active

participation by customers in the form of demand response in organized wholesale energy markets helps to increase competition in those markets." *Id.* ¶ 9 (App. 145a).

In addressing comments on the compensation for demand response resources, FERC noted, "barriers remain to demand response participation in organized wholesale energy markets." *Id.* ¶ 57 (App. 181a). It explained that "the inadequate compensation mechanisms in place today in wholesale energy markets fail to induce sufficient investment in demand response resource infrastructure and expertise that could lead to adequate levels of demand response procurement." *Id.* (quotations omitted) (App. 183a).

FERC also explained why paying demand response resources at LMP under the net benefits test properly compensates those resources. "[W]hen reductions in LMP from implementing demand response results in a reduction in the total amount consumers pay for resources that is greater than the money spent acquiring those demand response resources at LMP, such a payment is a cost-effective purchase from the customers' standpoint." *Id.* ¶ 50 (App. 178a). Therefore, demand response resources would only be compensated at LMP when providing more benefit to the system than the cost to compensate those resources. "[R]ather than requiring compensation at LMP in all hours, the Commission requires the use of the net benefits test described herein to ensure that the overall benefit of the reduced LMP that results from dispatching demand response resources exceeds the cost of dispatching those resources." *Id.* ¶ 53 (App. 179a-180a).

FERC concluded "that paying LMP can address the identified barriers to demand response providers,"

leading to "increased levels of investment in and thereby participation of demand response resources ... moving prices closer to the levels that would result if all demand could respond to the marginal cost of energy." *Id.* ¶¶ 58–59 (App. 183a).

FERC also rejected the argument that the payment of LMP would overcompensate demand response providers because they also "effectively receive 'G,'" the retail cost of energy they do not consume when they reduce their demand. *Id.* ¶ 60 (App. 184a–185a). FERC noted that demand response resources would participate in wholesale markets only when doing so is cost-effective under the net benefits test, and that it therefore followed that "demand response resource[s] should also receive compensation at LMP." *Id.* ¶ 61 (App. 185a). As Dr. Kahn explained, paying demand response LMP "treats proffered reductions in demand on a competitive par with positive supplies; but the one is no more a [case of overcompensation] than the other: the one delivers electric power to users at marginal costs—the other—reductions in cost—both at competitively-determined levels." *Id.* (alternation in original; emphasis omitted) (quoting 2010 Affidavit of Dr. Alfred Kahn 9–10). LMP is the competitively determined cost of balancing the grid regardless of whether the grid is balanced by a generator or a demand response resource.

Further, FERC explained, in the absence of market power concerns in the current competitive wholesale energy market, FERC does not "inquire into the costs or benefits of production for the individual resources participating as supply resources," and it "will not here ... single out demand response resources for adjustments to compensation," while continuing to pay LMP to generators without regard to their

individual costs or benefits. *Id.* ¶ 62 (App. 186a). In addition, FERC agreed that "given the differences in retail rate structures" within systems and "even within individual states," incorporating retail rates into wholesale payments to wholesale demand response providers would present significant practical difficulties. *Id.* ¶ 63 (App. 186a).

Commissioner Moeller dissented. He did *not* question FERC's jurisdiction here. To the contrary, he stated: "nowhere did I review any comment or hear any testimony that questioned the benefit of having demand response resources participate in the organized wholesale energy markets." *Id.* at 1 (App. 238a). He also agreed that "[s]ignificant barriers do exist which prevent demand response from reaching its full potential." *Id.* at 2 n.5 (App. 240a n.230).

Commissioner Moeller believed, however, that paying demand response resources LMP would overcompensate those resources. He first noted the "near-universal agreement that the LMP reflects the value of the marginal unit, and as such, it sends the proper price signal to keep supply and demand in relative balance" in wholesale energy markets. *Id.* at 4 (App. 242a). But, he concluded that demand response resources would nonetheless be overcompensated because they would not only receive LMP, but also avoid the cost of the retail energy consumption that otherwise would have been incurred. *Id.* at 4–7 (App. 242a–247a).

On rehearing, FERC upheld its order, explaining again that it had jurisdiction to regulate demand response due to its "direct and substantial effect on rates" in wholesale energy markets, Order 745-A ¶ 31 (App. 66a–67a), and "that LMP is the appropriate compensation level for demand response resources for service provided in the organized wholesale energy

markets" when the net benefits test is satisfied. *Id.* ¶ 54 (App. 78a).

4. *The Court of Appeals' Decision.* A divided panel of the D.C. Circuit held that FERC lacks jurisdiction to issue Order 745. The majority "agree[d] with [FERC] that demand response compensation affects the wholesale market," observing that it will both "lower the wholesale price" and "increase system reliability." App. 7a; *see also id.* at 13a. But, on two grounds, the court nonetheless rejected FERC's argument that it was properly exercising its jurisdiction over matters "affecting" wholesale rates and sales.

First, the court expressed concern that FERC's "affecting" jurisdiction "has no limiting principle" and "could ostensibly authorize FERC to regulate any number of areas, including steel, fuel and labor markets." App. 7a. The court acknowledged FERC's argument that it was asserting jurisdiction over "direct participants in jurisdictional wholesale energy markets," but rejected it, saying that FERC had "'lure[d]' non-jurisdictional resources into the wholesale market in the first place to create jurisdiction." *Id.* at 7a–8a.

Second, the court said, "FERC can regulate practices affecting the wholesale market ... provided the Commission is not directly regulating a matter subject to state control, such as the retail market." App. 9a. But, the court concluded that demand response is "part of the retail market. It involves *retail* customers, their decision whether to purchase *at retail*, and the levels of *retail* electricity consumption." *Id.* at 10a.

Finally, the court stated that, "even if we *assume* FERC had statutory authority to execute the Rule in

the first place, Order 745 would still fail." App. 14a. In the court's view, "FERC failed to properly consider—and engage—Commissioner Moeller's reasonable (and persuasive) arguments ... that Order 745 'overcompensat[es]' demand response resources because it 'requires that demand resource[s] be paid the full LMP *plus* be allowed to retain the savings associated with [the provider's] avoided retail generation cost." *Id.* (alteration in original) (quoting dissent). The court rejected FERC's explanation "that demand response resources are comparable to generation resources," on the ground that "generation resources are incomparably saddled with generation costs." *Id.* at 15a.

Judge Edwards dissented on both the issue of whether FERC has jurisdiction and on the issue of the appropriate level of compensation. He explained that FERC is entitled to deference in determinations about the scope of its jurisdiction. App. 18a–20a. He concluded that "there is no doubt that demand response participation in wholesale markets and the ISOs' and RTOs' market rules concerning such participation constitute 'practice[s] ... affecting' wholesale rates," and therefore fit comfortably within FERC's "'affecting' jurisdiction" provision. *Id.* at 20a (alteration and omission in original).

Judge Edwards observed that "[f]or some years now, FERC has recognized that the direct participation of demand response resources in wholesale markets improves the functioning of these markets in several respects." App. 25a. Specifically, FERC has explained that doing so (i) "lowers wholesale prices because lower demand means a lower wholesale price"; (ii) "mitigates market power of suppliers of electricity because they have to compete with demand response resources and adjust

their bidding strategy accordingly"; and (iii) "enhances system reliability, for example, by reducing electricity demand at critical times." *Id.* (internal quotations omitted).

Further, he pointed out that Order 745 does not intrude on state authority over retail sales both because demand response is not a retail sale, and because the Order calls for compensation of demand response resources only when state law permits such resources to participate in organized wholesale markets. App. 31a ("[T]he Order preserves State regulation of retail markets. This is hardly the stuff of grand agency overreach."). He also rejected the notion that there is no limiting principle to FERC's jurisdictional authority to regulate demand response—explaining that FERC cannot directly regulate retail sales and is limited to regulation only of matters directly affecting or closely related to wholesale rates. *Id.* at 33a–34a.

Finally, the dissent asserted that the court should have deferred to FERC in this "highly technical regulatory" case involving "ratemaking decisions." App. 39a. The dissent agreed that FERC was required to respond to the concern that LMP overcompensates demand response resources because they "already get the benefit of the forgone expense of retail electricity." *Id.* at 40a. In the dissent's view, however, the Commission "provided a thorough explanation for why compensating demand response at the LMP (and not LMP–G) was neither unjust nor over-compensatory." *Id.*

First, FERC "identified numerous barriers preventing adequate participation of demand response in wholesale markets;" and, "citing record evidence," concluded that "'the inadequate compensation mechanisms in place today in

wholesale energy markets fail to induce sufficient investment in demand response resource infrastructure and expertise that could lead to adequate levels of demand response procurement.'" App. 41a (quoting Order 745 ¶ 57). Thus, "'paying LMP when cost-effective may help remove these barriers to entry of potential demand response resources, and, thereby, help move prices closer to the levels that would result if all demand could respond to the marginal price of energy.'" *Id.* at 42a (quoting Order 745-A ¶ 63).

In addition, the dissent observed, the Commission "offered reasonable grounds for treating demand response as comparable to generation resources." App. 42a. It recognized that "from the perspective of an ISO or RTO, a demand response resource was comparable to a generation resource inasmuch as demand response is equally capable of balancing wholesale supply and demand." *Id.* (citing Order 745-A ¶ 57). FERC further explained that "'examining cost avoidance by demand response resources is not consistent with the treatment of generation.'" *Id.* (quoting Order 745-A ¶ 65). For both generation and demand resources, "the comparability of compensation is assessed without regard to outside costs and credits." *Id.* at 43a.

Thus, the dissent concluded, "[t]his court has no business second-guessing the Commission's judgment on the level of compensation." App. 43a.

FERC and numerous other parties sought rehearing en banc. The court denied all petitions. App. 255a. Thereafter the court of appeals stayed issuance of the mandate pending this Court's action. *Id.* at 257a.

SUMMARY OF ARGUMENT

The FPA grants FERC authority to regulate both "the sale of electric energy at wholesale in interstate commerce," and "any ... practice ... affecting" wholesale rates. 16 U.S.C. §§ 824(b)(1), 824e(a). FERC thus has jurisdiction to regulate both the organized wholesale energy markets administered by the FERC-approved RTOs and ISOs whose interstate systems cover more than half the nation, and "practice[s] affecting" wholesale rates in those markets, such as the participation of demand response resources.

In Order 745, FERC determined that system operators must pay all market participants—including demand response resources—the same amount when demand response is providing a benefit equivalent to that provided by generation, *i.e.*, where it is assisting in balancing supply and demand on the system and it provides a net benefit to electricity consumers. FERC based that judgment on a decade of experience in which it sought to eliminate barriers to demand response participation in wholesale electricity markets. FERC found that regulation of system operators' purchases of demand response would lower wholesale prices and improve system reliability and thus was necessary to ensure just, reasonable and non-discriminatory wholesale rates.

Without regard for this history and context, the D.C. Circuit held that FERC lacks jurisdiction to regulate the purchase of demand response resources in organized wholesale energy markets. But, all parties and the court agreed that demand response has a significant impact in the wholesale energy market by "lower[ing] the wholesale price" and "increas[ing] system reliability." App. 7a. Thus, demand-side participation in organized wholesale

energy markets is clearly a "practice[] affecting" wholesale rates, and squarely within FERC's jurisdiction, as the FPA's text and this Court's cases demonstrate. FERC has asserted jurisdiction to regulate demand response participation in organized wholesale markets for more than a decade. Its judgment is entitled to judicial deference.

The court of appeals concluded, however, that FERC's authority is displaced by the states' exclusive jurisdiction over retail sales of electricity. FERC's decision to allow demand response resources to participate in *wholesale* energy markets does not regulate *retail* sales. Indeed, demand response could not be a regulation of retail sales of electricity, because there is no "sale of electric energy." FERC's order did not set or invalidate a retail rate. And, this Court's cases make clear that any indirect effect that FERC regulation may have on the retail market would not deprive FERC of authority to adopt regulations in the wholesale market.

The D.C. Circuit's decision also threatens FERC's ability to comply with Congress's mandate in the Energy Policy Act of 2005 that demand response participation in wholesale electricity markets should be encouraged. The decision would directly undermine Congress's energy policies: Prices will rise as the result of the need to dispatch unnecessary and higher cost generation—costs that consumers will ultimately have to pay. And grid operators will lose the full benefit of an important resource that can balance system load when demand spikes or there is an unexpected loss of generation.

In sum, demand response participation in wholesale energy markets is a "practice[] affecting" wholesale rates, and FERC thus has jurisdiction to regulate that participation.

FERC also reasonably determined the appropriate compensation to be paid to demand response providers, and the court of appeals erred in failing to defer to the Commission's exercise of its ratemaking expertise. FERC found that demand response resources should be paid LMP—the same compensation paid to generators—when demand response providers have "the capability to balance supply and demand as an alternative to a generation resource and when dispatch of that demand response resource is cost effective as determined by the net benefits test." Order 745 ¶ 2 (App. 141a).

FERC determined that its regulation—and the compensation it required—was necessary to overcome the substantial barriers to full participation of demand response resources in wholesale energy markets. Demand response providers must make substantial investments in order to "bid" demand into real-time and day-ahead energy markets, including installation of advanced metering equipment, automated load curtailment systems, energy management systems, and/or communications systems that allow a demand response resource reliably to curtail consumption of electricity, at the system operator's direction, when such bids clear in wholesale energy markets. FERC reasonably found that "a lack of incentives to invest in enabling technologies can be addressed by making additional investment resources available to market participants" and that paying LMP "to demand response will provide the proper level of investment resources for capital improvements." Order 745-A ¶ 62 (App. 84a).

In reaching this conclusion, FERC pointed to substantial evidence that economic obstacles were preventing demand response resources from fully

participating in wholesale markets. FERC cited to evidence that demand response participation dropped substantially when the nation's largest system operator ceased paying LMP and evidence showing that, at then-prevailing compensation levels, demand response participation remained low and that there was "untapped" potential for greater demand response participation in the wholesale markets.

The Commission also reasonably found that fundamental nondiscrimination principles support compensating demand response providers at LMP "LMP has therefore been the primary mechanism for compensating generation resources clearing in the organized wholesale energy markets since their formation." *Id.* ¶ 73 (App. 91a–92). Thus, the Commission logically concluded that where demand response provides the same value as generation, it should be paid the same compensation. Indeed, FERC's compensation approach was consistent with that already used in some circumstances by some system operators—entities with no incentive to overcompensate demand response providers.

Finally, the Commission's decision to reject the lower compensation standards advocated by generators in the proceedings below in favor of LMP is consistent with "the policy of the United States that ... unnecessary barriers to demand response participation in energy, capacity and ancillary service markets shall be eliminated." 16 U.S.C. § 2642 note.

Instead of deferring to the Commission's ratemaking expertise, the court below faulted FERC for a purported failure to address objections to LMP advanced in the rulemaking proceeding. The court found FERC's explanation for its chosen rate inadequate based on the court's view that generators incur costs to provide service that are not incurred by

demand response resources. But in competitive markets, a company that can provide a service at a cost lower than market price may nonetheless charge market price and earn higher profits than other providers. Moreover, as the Commission explained, basing compensation for demand response resources on "costs" would be inconsistent with FERC's precedent addressing the compensation of generation resources, which are paid LMP without regard to government credits or input costs. And, critically, FERC took steps to ensure that demand response resources were only paid LMP when, in fact, they provide economically comparable service to generation, *i.e.*, "*only when* their participation in the wholesale electricity market actually lowers the market-clearing price for wholesale electricity." App. 17a (Edwards, J., dissenting).

The court of appeals also erred in concluding that Order 745 necessarily "'overcompensat[es]'" demand response resources because it requires that those resources "'be paid the full LMP *plus* be allowed to retain the savings associated with [the provider's] avoided retail generation costs.'" App. 14a (alterations in original; emphasis added). Companies that provide demand response often *shift* electricity use to a non-peak time rather than avoiding its consumption. And, companies often incur shut down and start up costs when providing demand response. The Commission has discretion to reject an administratively burdensome cost-based regime in favor of LMP in circumstances where demand response resources can provide a net benefit and balance the system load.

ARGUMENT

I. FERC REASONABLY CONCLUDED THAT IT HAS JURISDICTION TO REGULATE THE RULES GOVERNING DEMAND RESPONSE PARTICIPATION IN ORGANIZED WHOLESALE ENERGY MARKETS.

A federal agency is entitled to deference when it interprets the scope of its jurisdiction under a statute it administers. *See City of Arlington v. FCC*, 133 S. Ct. 1863, 1868, 1874–75 (2013). Here, FERC's view of its jurisdiction is longstanding and correct, and thus courts are obliged to give it *Chevron* deference.

RTOs and ISOs operate organized wholesale energy markets under tariffs approved by FERC. These markets determine wholesale prices of energy for their respective regions, a matter within FERC's exclusive jurisdiction. Order 745 addresses *only* the terms under which these system operators are authorized to allow demand response resources to participate in these markets. As we show below, FERC reasonably determined that it has jurisdiction to regulate the rules used by system operators to govern demand response participation in the markets they administer.

A. The FPA's Text Plainly Provides FERC With Jurisdiction.

Section 201(b) of the FPA gives FERC jurisdiction over "the transmission of electric energy in interstate commerce" and "the sale of electric energy at wholesale in interstate commerce." 16 U.S.C. § 824(b)(1). FERC's jurisdiction is "exclusive," and "extend[s] to" ensuring that "rates and practices ... affecting rates, are just and reasonable." *Nw. Cent.*

Pipeline Corp. v. State Corp. Comm'n, 489 U.S. 493, 506 (1989).[3]

Thus, FERC has authority to regulate "any rule, regulation, practice or contract affecting [a] rate" subject to the jurisdiction of the Commission. 16 U.S.C. § 824e(a). That text broadly grants FERC regulatory power over the practices "'affecting'" wholesale rates "without qualification or exception." *Permian Basin Area Rate Cases*, 390 U.S. 747, 783–84 (1968). This Court has further explained that "[t]he rules, practices, or contracts 'affecting' the jurisdictional rate are not themselves limited to the jurisdictional context." *Fed. Power Comm'n v. Conway Corp.*, 426 U.S. 271, 281 (1976). *See also Miss. Power & Light Co. v. Miss. ex rel. Moore*, 487 U.S. 354, 371 (1988) (FERC's exclusive jurisdiction "applies not only to rates but also to [practices] that affect wholesale rates").

That is not to say that FERC has exclusive authority over state practices with only tangential effects on wholesale rates. The effect on wholesale rates must be direct. *See Nw. Cent. Pipeline*, 489 U.S. at 514, 517–19; *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 308 (1988). In addition, FERC cannot directly regulate matters expressly assigned to states by section 201(b) of the FPA, such as retail sales and intra-state transmission and generating

---

[3] The relevant provisions of the Natural Gas Act ("NGA") and the FPA "'are in all material respects substantially identical,'" and this Court follows an "established practice of citing interchangeably decisions interpreting the pertinent sections of the two statutes." *Ark. La. Gas Co. v. Hall*, 453 U.S. 571, 577 n.7 (1981).

facilities. *See* 16 U.S.C. § 824(b)(1); *ONEOK, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1599–601 (2015).[4]

The court of appeals agreed that regulation of system operators' treatment of demand response resources affects wholesale rates. But it nonetheless concluded that FERC lacks jurisdiction on two grounds: first, Order 745 impinges on an area of exclusive state control established by FPA section 201(b); and second, demand response participation in wholesale markets has too attenuated a relationship with wholesale rates to permit FERC regulation.

With respect to the first ground, the court's decision cannot be reconciled with the text of section 201(b). Order 745 does not regulate electric generation, the local distribution of electricity or retail sales of electricity. The court recognized that demand response is not a *sale* of electricity; *a fortiori*, it cannot be a retail sale of electricity over which the states have exclusive authority. App. 6a. In responding to an argument that the NGA's analogous provision (section 1(b)) "create[d] a complete exemption of direct sales from [federal] curtailment regulations," this Court explained: "The answer is that ... § 1(b) withheld from [FERC] only *rate-setting* authority with respect to direct sales." *Fed. Power Comm'n v. La. Power & Light Co.*, 406 U.S. 621, 637–38 (1972). Order 745 does not *set* retail rates or address any other terms of retail sales. *See also* App.

---

[4] Section 201(b) of the FPA provides FERC with jurisdiction over wholesale sales and interstate transmission, and then states that FERC cannot regulate "any other sale of electric energy" or "facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter." 16 U.S.C. § 824(b)(1).

31a (Edwards, J., dissenting) ("[t]he demand response at issue here is forgone consumption, which is no 'sale' at all," and thus not within state authority under FPA section 201(b)).

Significantly, moreover, the FPA is not symmetrical: FERC has jurisdiction over matters directly "affecting" wholesale rates. States have carefully delineated jurisdiction, including over rates for retail sales of energy, but do not have analogous "affecting" jurisdiction over any matter related to rates for retail sales. The states' jurisdiction over rates for retail sales of electric energy cannot be expanded to embrace all matters "affecting" retail rates, and certainly not expanded to *displace* a FERC order affecting wholesale rates and directed at jurisdictional entities such as RTOs and ISOs that regulates their management of markets for wholesale energy and that expressly preserves existing state programs involving demand response, *see supra* p. 16.[5]

Respondents, in essence, argue that reducing energy consumption is the same as making a retail energy purchase because reducing consumption sets off a chain of events that may affect consumers' bills for retail energy purchases. *See* Opp. 18–19. But there is a critical difference between directly setting a retail price and engaging in wholesale market regulation that ultimately affects a retail price. States have exclusive jurisdiction over retail sales of

---

[5] Plainly, states lack authority to regulate demand response participation in wholesale energy markets because such regulation would directly affect wholesale rates. Thus, on respondents' view, neither FERC nor the states could regulate demand response in wholesale markets, leaving a new regulatory gap, an outcome Congress sought to prevent in the FPA. *See supra* pp. 4–5.

electric energy; but, as just explained, they do not have exclusive jurisdiction over practices affecting such sales. Demand response providers bid a customer's or an aggregation of customers' ability to reduce their consumption through a wholesale market clearing mechanism, and the resource follows the dispatch instructions of the system operators. That service involves investment in the development and installation of advanced technology that allows communication between and among aggregators, customers' facilities and the system operator. When offering demand response services, neither demand response providers nor their customers are engaged in retail sales of electric energy. Order 745 does not address any aspect of a retail transaction.

Under the plain meaning of the FPA's text—which gives FERC authority to regulate "wholesale sales of electric energy" and practices "affecting" such sales—FERC has jurisdiction to regulate wholesale electricity markets and the participation of demand response resources in those markets. And FERC's repeated invocations of the importance of demand response participation in wholesale markets and its established practice of regulating such participation underscore this point. *See supra* pp. 11–13. The D.C. Circuit should have "accord[ed] particular deference to [this] agency interpretation of 'long-standing' duration." *Barnhart v. Walton*, 535 U.S. 212, 219–20 (2002).

The D.C. Circuit also believed that if FERC has jurisdiction over demand response participation in wholesale markets as a matter directly affecting wholesale energy rates, then FERC's "affecting" jurisdiction would have "no limiting principle" and would allow FERC "to regulate any number of areas, including the steel, fuel and labor markets." App. 7a.

But steel, fuel and labor are merely inputs for the construction and operation of electricity generation and other electricity facilities and thus only indirectly influence bids in wholesale markets, while demand response resources participate in wholesale markets and directly affect wholesale rates. Demand response providers bid directly into the wholesale market for energy and, under Order 745, those bids are accepted "*only when* an ISO or RTO can use the demand response resource in lieu of a generation resource to balance supply and demand, *and only when* paying a demand response resource is cost-effective under the rule's net benefits test .... That is about as 'direct' an effect and as clear a 'nexus' with the wholesale transaction as can be imagined." *Id.* at 37a (Edwards, J., dissenting). In any event, this Court has long applied the direct effects test in addressing the scope of FERC's jurisdiction under the FPA and the NGA. *See supra* p. 30–31. It and other courts have had no difficulty distinguishing direct from attenuated effects. *See La. Power & Light*, 406 U.S. at 637–38 (rejecting a similar argument that construing the NGA to withhold from federal regulation "only *rate-setting* authority with respect to direct sales" would "swallow up the proviso's exemption for direct sales").

Respondents' related argument that FERC somehow manufactured demand response's effects in the wholesale markets is plainly counterfactual. Opp. 20–21. If demand decreases, the wholesale price of energy decreases, sometimes significantly. FERC simply recognized the benefits of demand response participation in promoting competition and market efficiency and determined that demand response participation was necessary to achieving just and reasonable rates. *See supra* pp. 16–18.

In sum, this Court should defer to FERC's reasonable judgment that the FPA gives it authority to authorize demand response participation in regional wholesale electricity markets and to FERC's established practice of regulating that participation.

B. This Court's Cases Make Clear That FERC Has Jurisdiction To Regulate Demand Response Participation In Organized Wholesale Energy Markets.

This Court's precedents delineating FERC's jurisdiction to regulate interstate electricity and natural gas markets make clear that FERC had jurisdiction to issue Order 745.

This Court's decision in *Mississippi Power* demonstrates that the D.C. Circuit's decision is wrong. That case involved an agreement among four power companies allocating power produced by a nuclear plant. The Court held that the agreement was a "contract affecting the wholesale rates of those ... companies," 487 U.S. at 360 n.6, and that "States may not regulate in areas where FERC has properly exercised its jurisdiction to ... insure that agreements affecting wholesale rates are reasonable." *Id.* at 374. Thus, Mississippi could not regulate that contract's power allocations even though it sought to do so in the "exercise of its undoubted jurisdiction over retail sales," specifically over the prudence of "an increase in [the power company's] retail rates." *Id.* at 365, 372; *see also id.* at 374, 376.

This Court did not find that the FPA displaces FERC's jurisdiction over a matter "affecting" wholesale rates whenever a state seeks to regulate the retail power market. Instead, the Court examined the impact of state action on wholesale rates and concluded that it impermissibly "affected"

rates within FERC's jurisdiction and was preempted, even though the State was regulating retail markets.

Here, the terms of demand response participation in organized wholesale markets directly and substantially affect wholesale rates. And, the court of appeals did *not* find that FERC was regulating retail *rates*. That should have been the end of the matter. Instead, and contrary to this Court's approach, the D.C. Circuit *displaced* FERC jurisdiction over RTOs and ISOs and their operation of organized wholesale markets on the theory that FERC's action might have an indirect impact on state regulation of retail markets. This analysis is inconsistent with this Court's approach in *Mississippi Power*.

Northern Natural Gas Co. v. State Corp. Commission, 372 U.S. 84 (1983), also illustrates this point in the analogous context of NGA jurisdiction. There, Kansas argued that it could require interstate pipelines to purchase gas from state producers in proportion to the latter's production, on the theory that it was regulating only "the 'production or gathering' of natural gas, which is exempted from" federal regulation under the NGA. *See id.* at 89. Kansas further argued that its regulation was directed at conservation of natural gas, "traditionally a function of state power." *Id.* at 93. This Court rejected the State's arguments, concluding that FERC had exclusive authority to regulate "the intricate relationship between the purchasers' cost structures and eventual costs to wholesale customers," *id.* at 92, even though the nominal subject of the state law involved matters within state authority.

To be sure, FERC cannot directly regulate rates of retail sales of energy. But much FERC regulation has an *effect* on retail matters, and nothing in this

Court's analysis in cases arising under the FPA and the NGA suggests that FERC's authority to regulate the operation of regional markets and practices "affecting" wholesale rates in those markets is eliminated because a FERC order may affect retail sales or because the state is or may in the future be regulating a matter *related to* the retail market. Thus, here, it does not matter that FERC's regulation of demand response resources participation in organized wholesale markets might somehow affect the retail market. That fact does not divest FERC of jurisdiction. *See also Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953, 966 (1986) (state authority is limited to "'those [sales] which Congress has made explicitly subject to regulation by the States'"); *La. Power & Light Co.*, 406 U.S. at 623, 637–38, 642 (the statute "withheld from [FERC] only rate-setting authority with respect to direct sales," and thus FERC has authority to require pipelines to restrict retail and wholesale gas deliveries in times of gas shortage).

This Court's recent decision interpreting the NGA in *ONEOK*, 135 S. Ct. at 1591, strongly supports FERC jurisdiction here. In that case, this Court allowed state-law price-fixing claims against natural gas companies to go forward, finding that FERC's jurisdiction to regulate the "practice" of index manipulation of *wholesale* natural gas sale prices did not automatically preempt state-law antitrust claims directed at *retail* natural gas prices. This Court explained that where a practice affects jurisdictional as well as non-jurisdictional sales, the NGA does not preempt state-law claims "'aimed at'" practices affecting retail prices. *Id.* at 1599–600.

Critically here, all members of this Court recognized FERC's jurisdiction over a practice

affecting wholesale rates—to wit, index price manipulation—or there would have been no need for a preemption analysis. *Id.* at 1599–602; *see also id.* at 1604–05 (Scalia, J., dissenting) ("[t]he Commission has reasonably determined" that it has jurisdiction over "the behavior involved in this case"). The Court simply authorized *concurrent* state regulation of price manipulation in connection with retail rates, where the state laws are not directed at wholesale rates or transactions and do not conflict with FERC's regulation of wholesale rates and transactions. *Id.* at 1599–602. But this Court did not remotely suggest that state jurisdiction to regulate practices aimed or directed at retail sales deprives *FERC* of jurisdiction to regulate the same practices where they affect wholesale rates and transactions. That is this case.

C. FERC Has Reasonably Determined That Regulating Demand Response Participation In Wholesale Markets Is Necessary To Ensure Just And Reasonable Wholesale Rates.

As the Statement of the Case reflects, FERC has engaged in a sustained effort to act in accord with Congress's determination in the EPAct that unnecessary barriers to demand response participation in energy, capacity and ancillary services markets should be eliminated. Like Congress, FERC has concluded that the wholesale energy market "functions effectively *only* when both supply and demand can meaningfully participate." Order 745 ¶¶ 1, 57 (App. 140a, 181a) (emphasis added). Over the course of the last decade, demand response has come to play an important role in wholesale energy markets, reducing prices and unnecessary and expensive generation. Order 745-A ¶¶ 23–24 (App. 58a–60); Order 745 ¶¶ 112–115 (App.

219a–221a). Thus, FERC reasonably found that exercising jurisdiction over demand response is "essential to the Commission fulfilling its statutory responsibility to ensure that jurisdictional rates are just and reasonable." Order 745-A ¶ 20 (App. 57a). Without demand response participation, wholesale energy markets will not "function[] effectively": Competition will be constrained; and prices will be higher.

In addition, FERC found that demand response participation helps support the reliability of the electric grid. Order 745 ¶ 10 (App. 147a–148a). PJM's experience is instructive. In the "polar vortex" of the 2014 winter, for example, PJM deployed demand response to maintain system reliability and to meet its highest ever winter peak demand. *See* PJM Interconnection C.A. Pet. For Reh'g 10–11. *See also* U.S. Dep't of Energy, *Benefits of Demand Response in Electricity Markets and Recommendations for Achieving Them* ix–x (2006) (touting demand response's "ability to manage the electric grid ... and reduc[e] the potential for forced outages"); William Massey, Robert Fleishman & Mary Doyle, *Reliability-Based Competition in Wholesale Electricity: Legal and Policy Perspectives*, 25 Energy L.J. 319, 350-52 (2004) (describing National Association of Regulatory Utility Commissioners and General Accounting Office studies identifying "the considerable reliability potential of demand response").

In arguing that demand response participation is not as important as FERC has determined, respondents have previously suggested—contrary to FERC's judgment, historic evidence and logic—that state retail demand response programs can deliver the same benefits that FERC's regulation of demand

response participation in wholesale markets can deliver. Opp. 28. But, "attempting to replicate demand response at the state level runs into many of the barriers that prompted FERC to act." Joint State Brief in Support of Petition 12 n.18. "At best, the panel decision leaves only the possibility for a balkanized market to develop, where states are required to patch together individual rules for participation of demand response resources at the retail level, with no clear mechanism for monetarily incentivizing such resources to participate." *Id.* at 12. But "[t]he likelihood is that huge portions of the demand response will simply disappear." *Id.*

One critical problem is that the "demand response programs that predominate in retail markets are 'generally not considered "firm" resources,' because they are not known to grid operators or 'dispatchable,' meaning that system-wide decisions cannot be made, as they are in energy markets, based on legally-binding specific reductions." Del. Pub. Adv. Br. 12 (citation omitted). Moreover, wholesale demand response has a "'much larger price impact' [than retail demand response] because it can 'set the market clearing price.'" *Id.*

In sum, FERC reasonably determined that it has jurisdiction to regulate demand response participation in wholesale energy markets to ensure just and reasonable rates and to promote grid reliability.

II. FERC'S REASONABLE JUDGMENT ABOUT THE APPROPRIATE COMPENSATION FOR DEMAND RESPONSE PARTICIPATION IN WHOLESALE MARKETS IS ENTITLED TO DEFERENCE AND SHOULD BE UPHELD.

Courts "afford great deference to the Commission" in cases involving ratemaking decisions as the "statutory requirement that rates be 'just and reasonable' is obviously incapable of precise judicial definition." *Morgan Stanley*, 554 U.S. at 532. FERC's judgment that demand response providers should be paid LMP when certain conditions in the wholesale energy market are satisfied is reasonable and fully explained, and the court of appeals' decision that FERC failed adequately to respond to the argument that Order 745 overcompensates demand response resources is incorrect.

A. FERC's Judgment Is Reasonable And Fully Supported By The Record.

"Additional demand response has the potential to produce more efficient market outcomes, contribute to a cleaner environment, result in lower cost to customers, and help check market power since it provides a countervailing willingness to reduce demand in the face of high prices." NOPR at 1–2 (footnote omitted) (Moeller, C., concurring in part and dissenting in part) (JA54). Thus, in the proceeding at issue, FERC sought to address the critical issue of how demand response providers should be compensated when a provider's bid is accepted to balance system load.

"[S]ince their formation," RTOs and ISOs have compensated "*generation* resources clearing in the organized wholesale energy" on the basis of what is

known as "the locational marginal price" or "LMP." Order 745-A ¶ 2, 73 (App. 47a, 92a) (emphasis added). "LMP reflects the marginal value of the last unit of resources necessary to balance supply and demand." *Id.* ¶ 73 (App. 91a).

Before issuing Order 745, FERC had declined to require system operators to compensate demand response on the same basis as generation resources (*i.e.*, at LMP). But the Commission had also noted the need for a "continuing assessment" of this issue. NOPR ¶ 21 n.48 (JA42); *see also id.* ¶ 13 (JA35–36). At the outset of this proceeding, the Commission explained that its "continuing assessment" necessitated a change in course. FERC stated that as it "acquired more experience with the participation of demand response resources in the organized wholesale energy markets," it had become apparent that many existing compensation arrangements were inadequate and were not sufficient to ensure "just and reasonable" rates. *Id.* ¶ 21 n.48 (JA42).

After carefully considering compensation approaches advanced by all sectors of the industry, FERC concluded that "demand response resource[s] must be compensated for the service [they] provid[e] to the energy market at the market price for energy," *i.e.*, the "locational marginal price." Order 745 ¶ 2 (App. 141a–142a). Critically, FERC imposed two important limitations to ensure that demand response resources are paid LMP only when they provide benefits that are equivalent to the benefits provided by other competing resources, namely generation. *Id.* ¶ 48 (App. 176a–177a). First, "the demand response must be able to displace a generation resource in a manner that serves the [wholesale-market operator] in balancing supply and demand," *id.* ¶ 48 (App. 176a). Second, the payment

of LMP for the provision of demand response resources must be "cost-effective," *id.* (App. 177a), that is, "resul[t] in a reduction in the total amount consumers pay for resources that is greater than the money spent acquiring those demand response resources at LMP," *id.* ¶ 50 (App. 178a).

In determining that demand response resources should be paid LMP when these conditions are met, FERC reasonably relied on (i) the need to mitigate barriers that preclude demand response from fully participating in wholesale energy markets; (ii) fundamental principles of nondiscrimination embodied in the FPA; (iii) the historical practices of system operators in compensating demand response; and (iv) Congress's direction in the EPAct to encourage demand response.

Barriers to Entry. The Commission found that payment of LMP when "cost-effective" was justified by the substantial barriers to full participation of demand response resources in wholesale energy markets. Order 745-A ¶¶ 58–62 (App. 81a–84a). Specifically, as FERC found, demand response resources can fully participate in wholesale bidding markets only after making substantial and potentially unrecoverable investments. Order 745 ¶ 18 (noting the need for "investment" in "response-related technology (such as advanced metering)") (App.154a); NOPR ¶ 16 ("[D]emand response resources need to make investments in technology to enable participation in the organized wholesale energy markets, as well as incur costs in changing their operations in order to provide demand response.") (JA37–38). Moreover, as FERC found, "customers 'must have confidence that appropriate price signals will be sustained by stable competitive pricing structures, before they will make an

investment in demand response.'" *Id.* ¶ 9 (JA32); *see also* Comments of Wal-Mart 6 ("Walmart [is] willing to make the "significant investments and business sacrifices" to "deploy demand response resources" where there is a "comparable, consistent and transparent compensation" arrangement that "ensure[s] [demand response resources] receive a reasonable return on their investments") (JA565).

For example, electricity customers install "automated load curtailment systems, building energy management systems, energy storage, and other technologies to enable active price load control" to be able to commit to reliable curtailment of use when dispatched by a system operator. Comments of Viridity 6 (JA356). Companies like petitioners that aggregate and manage demand response resources build complex network operation centers that allow demand response to be bid into wholesale energy markets and ensure that end-user customers curtail demand when called upon to do so by system operators. *See, e.g.*, FERC, *Assessment of Demand Response and Advanced Metering* 34 n.80, 40 (2008); FERC, *Assessment of Demand Response and Advanced Metering* 20–21 (2013); Reply Comments of Viridity 9–12 (JA667–670); Comments of Viridity 20 (JA374). In light of the investment and cost barriers to demand response participation, FERC found that "a lack of incentives to invest in enabling technologies can be addressed by making additional investment resources available to market participants" and that paying LMP "to demand response will provide the proper level of investment resources for capital improvements." Order 745-A ¶ 62 (App. 84a).

Significantly, the Commission had before it evidence confirming that the barriers to entry that it had identified were, in fact, impeding full demand

response participation in wholesale markets, resulting in wholesale rates that were not just, reasonable and non-discriminatory.

First, before Order 745 issued, the nation's largest regional transmission operator, PJM, had paid LMP for demand response participation starting in 2002, but ceased doing so in 2008. NOPR ¶ 10 (JA33–34). After PJM discontinued paying LMP, "settled demand reductions began decreasing from previous years." *Id.* (JA33) (citing study that showed that reducing compensation from LMP resulted in a 36.8% decrease in demand response participation in the PJM system); *see also* Comments and Protests of Demand Response Supporters, Belbot Aff. at 2 (sworn testimony that large steel producer in PJM territory found that it was no longer economic to provide demand response after PJM ceased paying LMP) (JA1350–1353). PJM itself recognized and sought to address this problem by increasing payments for demand response, including payment of LMP in many circumstances. Supplemental Report and Submittal of PJM Interconnection (JA1235–1242, 1268–1275); 2009 Affidavit of Dr. Alfred Kahn 3–5 (JA1338–1342); Comments and Protest of Demand Response Supporters 9, 14–18 (JA1289–1290, 1296–1302). "The near absence" of demand response participation in energy markets at reduced compensation levels "is powerful empirical proof" of the significant barriers faced by demand response providers. Comments of Viridity 4 (JA354); *see also* Order 745 ¶ 43 (App. 174a) (discussing Viridity's comments); *id.* at 2 n.5 (Moeller, C., dissenting) ("[s]ignificant barriers do exist which prevent demand response from reaching its full potential") (App. 240a n.230).

Second, and relatedly, FERC had substantial evidence that, at then-prevailing compensation levels, demand response participation remained low and that there was "untapped" potential for greater demand response participation in the marketplace. *See, e.g.*, Reply Comments of Demand Response Supporters 9 ("[T]he less-than optimal levels of demand response are in fact widely acknowledged in State of the Market reports") (citing studies) (JA803); *id.* (noting Market Monitor for Midwest Independent System Operator "reported on the 'substantial' potential for demand response") (JA803); Supplemental Report and Submittal of PJM Interconnection 16 ("'[D]emand side of wholesale power markets is underdeveloped.'") (quoting PJM Market Monitor Report 2 (July 1, 2009) (JA1254); Comments and Protests of Demand Response Supporters 14 (noting that PJM market monitor has "consistently pointed out that the demand side of wholesale electricity markets in PJM is 'underdeveloped'") (JA1296); *see generally National Assessment, supra* (identifying barriers to entry and underutilization of demand response). Indeed, even where system operators paid LMP in certain circumstances, participation of demand response resources in wholesale energy markets remained low. Comments of New York State Public Service Commission 4, 6 (JA225, 227); Comments of Viridity 5 (JA354–355); *see also* Comments of EnerNOC 6 (documenting "grossly anemic participation by demand response" in ISO New England Energy markets resulting from very limited ability to earn LMP) (JA459–460).

The Commission thus acted reasonably in adopting a compensation approach to overcome the barriers to full demand response participation in wholesale

markets and, in turn, to ensure "just and reasonable" wholesale prices. *See* Order 745-A ¶ 63 (App. 85a) ("These barriers create an inelastic demand curve in the wholesale energy market that results in higher wholesale prices than would be observed if the demand side of the market were fully developed."). As the Commission found, "a lack of incentives to invest in enabling technologies can be addressed by making additional investment resources available to market participants" and paying LMP "to demand response will provide the proper level of investment resources available to capital improvement." Order 745-A ¶ 62 (App. 84a); *see also* NOPR ¶ 16 (JA37–38).

Nondiscrimination. The Commission also reasonably found that fundamental principles of nondiscrimination support compensating demand response providers at LMP *See* 16 U.S.C. § 824d(b) (prohibiting "any unreasonable difference in rates, charges, service, facilities, or in any other respect"). "Since [demand response] is actually—and not merely metaphorically—equivalent to supply response, economic efficiency requires that it be regarded and rewarded, equivalently, as a resource proffered to system operators, and be treated equivalently to generation in competitive power markets." 2010 Affidavit of Dr. Kahn 2 (footnote omitted) (JA830).

As noted, "LMP reflects the marginal value of the last unit of resources necessary to balance supply and demand" and, for that reason, "LMP has been the primary mechanism for compensating generation resources clearing in the organized wholesale energy markets since their formation." Order 745 ¶ 53 (App. 180a). But, as FERC found, where the "balancing" and "net benefits" conditions are satisfied, *see supra* p. 15–16, demand response can be as effective as increased generation in balancing the grid. Order

745-A ¶¶ 61–63, 67, 73 (App. 84a–86a, 88a–89a, 91a–92a); Order 745 ¶¶ 47, 56 (App. 175a–176a, 181a). Thus, the Commission logically concluded that where demand response provides the same value as generation, it should be paid the same compensation. Order 745-A ¶¶ 63, 68, 73 (App. 84a–85a, 89a, 91a–92a); Order 745 ¶ 53 (App. 179a–180a); NOPR ¶ 15 (citing 2009 Affidavit of Dr. Alfred Kahn) ("Given that the LMP represents the marginal value of the resource being used by the RTO or ISO to balance supply and demand, it follows that the LMP should be paid to any resource clearing in the RTO's or ISO's energy market.") (JA36–37).

Compensation of Demand Response by System Operators Prior to Order 745. FERC's compensation standard was also supported by industry practice. FERC observed that "[a]s a result" of its decision to "allo[w] each RTO and ISO to develop its own compensation methodologies for demand response resources .... levels of compensation for demand response vary significantly among RTOs and ISOs." Order 745 ¶ 14 (App. 150a). Relevant here, some system operators *already* compensated demand response at LMP in certain circumstances, such as when wholesale power prices exceeded a certain minimum threshold price. *Id.* (App. 150a–152a); *see also* NOPR ¶ 8. (JA30–32). In contrast, other system operators paid lower compensation, and one had historically refused to compensate demand response participation at all. Order 745 ¶ 14 (App. 150a–152a); NOPR ¶ 8 (JA30–32). Thus, FERC's decision to order payment of LMP to demand response providers was consistent with the historic compensation decisions of some RTOs and ISOs, which, as independent system operators, have no incentive to pay excessive amounts for demand

response.[6] It also addressed the failure of other system operators to adequately compensate demand response resources and ensure appropriate levels of demand response in wholesale energy markets. *See* Order 745-A ¶ 74 (App. 92a–93a); Order 745 ¶ 67 (App. 188a–189a); NOPR ¶¶ 10, 13 (JA33–34, 35–36).

Federal Policy Established in the EPAct. Finally, the Commission's decision to compensate demand response resources on a par with generation resources respects Congress's instructions in the EPAct. As previously noted, in that Act, Congress established as "the policy of the United States that ... unnecessary barriers to demand response participation in energy, capacity and ancillary service markets shall be eliminated." 16 U.S.C. § 2642 note. It further stated "the policy of the United States that time-based pricing and other forms of demand response, whereby electricity customers are provided with electricity price signals and the ability to benefit by responding to them, shall be encouraged." *Id.* While FERC did not rely on the EPAct as an "independent" source of authority, it properly recognized that the Act reflects "the policy of the

---

[6] Under the FERC's rules, an RTO "must be independent of any market participant," which includes any "entity that, either directly or through an affiliate, sells or brokers electric energy or provides ancillary services" to the RTO (unless excepted by the FERC) and any entity the FERC "finds has an economic or commercial interests that would be significantly affected" by the RTO's actions. 18 C.F.R. § 35.34(b)(2), (j)(1). FERC in Order 888 similarly required ISOs to be operationally and economically "independent" of any market participants. *See* Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 Fed. Reg. 21,540, 21,596 (May 10, 1996).

United States." Order 745-A ¶ 34 (App. 68a). FERC's adoption of LMP as the mechanism for compensating demand response resources follows Congress's direction and furthers its energy policy goals.

B. FERC Reasonably Explained Its Decision And Addressed Contrary Contentions.

The court of appeals did not defer to FERC's reasoned judgment on the appropriate level of compensation for demand response. Instead, the court faulted the Commission for its purported failure to address objections to the payment of LMP for demand response. App. 14a–15a. FERC, however, directly answered the objections raised below.

Initially, the court acknowledged the Commission's central finding that demand response should be paid the same level of compensation as generation because, in the settings where LMP must be paid, demand response and generation make "comparable" economic contributions. App. 15a; *see also id.* at 42a (Edwards, J., dissenting) (the Commission determined LMP was appropriate where demand was "comparable to generation resources"). In making this "comparability" determination, FERC did not simplistically assume that a "negawatt" of demand response is the same as a "megawatt" of generation in all circumstances. To the contrary, the Commission recognized that although demand response and generation may not be identical resources in every respect, "both types of resources are equally able to assist RTOs and ISOs in maintaining a balance between supply and demand when they meet an RTO's or ISO's requirements to deliver their product or service when and where needed on the margin." Order 745 ¶ 57 (App. 81a); *see also id.* ¶ 56 (stressing

that comparability "in th[e] context" of balancing supply and demand at the margin) (App. 80a).[7]

The Commission further took steps to ensure that demand response was paid LMP only when it was in fact, "comparabl[e]" to generation in allowing a system operator to balance load. Order 745-A ¶ 57 (App. 80a–81a). As explained above, FERC required payment of LMP only if (i) demand response actually allows a system operator to "balance" load, and (ii) satisfies the "net-benefits" test. *See supra* p. 15–16; *see also* Order 745 ¶ 94 ("LMP will not be paid to demand response resources in all hours") (App. 207a). FERC also agreed with commenters that demand response providers should generally be subject to "comparable" market participation rules. Order 745 ¶ 66 (App. 188a).

FERC's analysis thus provided a "direct response" to claims that paying LMP for demand response was "overcompensation," App. 15a, and the court should have deferred to it. But the court found FERC's explanation insufficient on several grounds. All lack merit.

The Costs of Generators. The court observed that "generation resources are incomparably saddled with generation costs," and, therefore, concluded that compensation for generators and demand response should not be equivalent. App. 15a. This is an economic *non-sequitor*.

There is nothing arbitrary, or even unusual, about basing compensation on the value of the service provided regardless of the underlying "cost" of

---

[7] In so finding, FERC relied on studies documenting the ability of demand response to "quick[ly] balance[e] ... the electricity grid." Order 745 ¶ 10 (App. 147a–148a).

providing the service. In competitive markets, a company that can provide a service at a cost much lower than market price is nonetheless entitled to charge the market price and earn higher profits than other providers. *See, e.g.*, Herbert Hovenkamp, *Federal Antitrust Policy* 5 (1994); Hal Varian, *Intermediate Microeconomics* 252–53 (2d ed. 1990); Stephen Breyer, *Regulation and its Reform* 21 (1982). FERC thus explained that awarding LMP based on "competitive bidding" between supply and demand resources "encourages more efficient supply and demand decisions in both the short run and the long run, notwithstanding the particular costs of production of individual resources." Order 745-A ¶ 65 (App. 86a–87a); *see also* Order 745 ¶ 65 (LMP established on the basis of competitive bidding between demand and supply resources "secures the most economical supplies needed") (App. 187a).[8]

Moreover, as the Commission explained, basing compensation for demand resources on "costs" would be inconsistent with FERC's established precedent addressing the treatment of generation resources. Order 745-A ¶ 65 (App. 86a–87a); Order 745 ¶ 62 (App. 186a). LMP is paid to generators without regard to the "cost" they incur. For example, a nuclear generator that incurs nearly zero marginal cost to supply electricity still earns the full LMP

---

[8] In contrast, the type of cost-based ratesetting reflected in the court of appeals' analysis of FERC's compensation decision would reduce incentives for suppliers to be efficient and "requir[e] the agency endlessly to calculate and allocate the firm's costs." *Nat'l Rural Telecom Ass'n v. FCC*, 988 F.2d 174, 178 (D.C. Cir. 1993); *see also* Breyer, *supra*, at 38 ("cost-of-service ratemaking is a highly imprecise undertaking—which often functions as badly as an imperfectly competitive markets").

when the marginal supplier setting the LMP is a relatively higher-cost generator. Comments of Verso Paper Corp. 10 & n.20 (JA255–256 & n.20); Comments of Viridity 8 (JA359–360). Likewise, generators can receive tax credits for solar power. Order 745-A ¶ 65 n.122 (App. 87a). But even where "generators realize a value of LMP plus the credit or savings," the Commission has never "take[n] such benefits or savings into account in determining how much to pay those resources." *Id.* Thus, reasoning by analogy, FERC concluded that it should not reduce the payments that a demand response provider receives simply because it can provide a comparable service at lower cost than a generator. Order 745-A ¶ 65 & n.122 (App. 86a–87a); *see also* Order 745 ¶ 62 (App. 186a).

The Supposed Savings From Avoided Consumption. The court concluded that Order 745 necessarily "'overcompensate[es]'" demand response resources because it requires that those resources "'be paid the full LMP *plus* be allowed to retain the savings associated with [the provider's] avoided retail generation cost.'" App. 15a (alterations in original). But FERC's findings foreclose that conclusion.

As a preliminary matter, the Commission ensured that demand response would only be compensated where it provided "net benefits." *See supra* pp. 15–17. Thus, rather than induce "[t]oo [m]uch" demand response, Order 745, at 9 (Moeller, C., dissenting) (App. 249a), FERC ensured demand response resources would only be compensated when the value of the service to purchasers was greater than the

payments that the demand response provider would receive. This is the opposite of "overcompensation."[9]

Further, the Commission's findings confirm that demand response providers do *not* receive "'the full LMP [and] retain the savings associated with [the provider's] avoided retail generation cost.'" App. 14a (alterations in original). Companies that provide demand response often do not avoid purchasing electricity, but instead *shift* the time they will use the electricity to a point when system demand is lower. *Energy Primer*, *supra*, at 46; Order 745 ¶ 22 (noting this "rebound" effect) (App. 157a–158a); Comments of Midwest ISO 6 (JA985); Comments of Public Interest Organizations 6 (JA607); *see also* Comments of Viridity 21 (JA375–376) (noting that some demand response resources will purchase and store extra energy to be used when curtailing demand); Reply Comments of Viridity 20 (JA678–679). Thus, for example, a company may postpone operation of a production line when a system operator notifies the company to reduce demand, and instead run the line when demand is lower. Because retail electricity costs typically do not fluctuate, the company's electricity costs would remain the same. In this situation, the participation of demand response resources would lead to *greater* wholesale market efficiency (by lowering demand and thus wholesale prices), while the company produces the same goods at the same retail cost of electricity. *Cf.* Order 745, at

---

[9] The notion that FERC was somehow inducing "too much" demand response is also belied by the fact that some system operators—entities with no reason to overcompensate demand response—had themselves recognized that on at least some occasions barriers to entry precluded full participation by demand response and that LMP should be paid to prevent excessive wholesale rates. *See supra* pp. 48–49.

4 (Moeller, C., dissenting) (contending that payment of LMP is "economically inefficient" because end-users will sell demand response rather than engage in production) (App. 250a).

Relatedly, there are shut down and start up costs when a company provides demand response. NOPR ¶ 16 (JA37–38); *see also* Comments of Steel Producers 8 ("Shutting down a steel production process is expensive ....") (JA449). Companies providing demand response may also continue to incur labor costs while not producing goods and services (and/or potentially pay overtime when shifting operations to a later point when demand for electricity may be lower). Comments of Verso Paper 4–5 (JA249–250); Comments of Viridity 19 (JA373). Demand response providers thus incur costs that can offset any retail electricity savings they may achieve (even if they do not shift production to a later time, *see supra*).[10]

Moreover, even if in some instances a demand response provider "saves" some electricity costs by providing demand response, and those costs are greater than those incurred in stopping and restarting production or other activities that the provider typically engages in, ascertaining and measuring those "savings" and then backing them out of the demand response payment would be a complex, costly and time-consuming undertaking—and certainly not possible to achieve in the context of bidding in "real-time" wholesale energy markets. *Compare Morgan Stanley*, 554 U.S. at 551 ("regulatory costs" of determining "marginal cost of ... power" would be "enormous"). And, to the extent

---

[10] FERC's findings also demonstrate that the court erred in assuming that generators were "saddled" with costs while demand response was effectively costless to supply. App. 15a.

FERC did so for demand response providers, it would likewise need to ascertain and subtract any subsidies paid to generators as well. FERC properly declined to undertake such burdensome inchoate calculations—and instead based its compensation requirement on the value of demand response under circumstances where it is capable of balancing supply and demand and is cost-effective. *See supra* p. 15–16; *see also* Order 745 ¶ 48 (App. 176a–177a).

CONCLUSION

The Court should reverse the decision below.

Respectfully submitted,

MATTHEW J. CUSHING
ENERNOC, INC.
One Marina Park Drive
Suite 400
Boston, MA 02210
(617) 692-2690
mcushing@enernoc.com

CARTER G. PHILLIPS *
C. FREDERICK BECKNER III
SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, D.C. 20005
(202) 736-8000
cphillips@sidley.com

Counsel for EnerNOC, Inc.

MARVIN T. GRIFF
HUSCH BLACKWELL LLP
750 17th Street, NW
Suite 900
Washington, DC 20006
(202) 378-2300
marvin.griff@huschblackwell.com

Counsel for EnergyConnect, Inc.

ALLEN M. FREIFELD
1801 Market Street
Philadelphia, PA 19103
(484) 534-2191
afreifeld@viridityenergy.com

Counsel for Viridity Energy, Inc.

ROBERT A. WEISHAAR, JR.
MCNEES WALLACE &
NURICK LLC
777 N. Capitol Street, NE
Suite 401
Washington, DC 20002
(202) 898-5700
rweishaa@mwn.com

Counsel for
the Coalition of MISO
Transmission Customers
and PJM Industrial
Customer Coalition

July 9, 2015

* Counsel of Record